



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,154	01/14/2002	Nobuya Harano	2001P005978	5070

30743 7590 07/11/2006

WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190

EXAMINER

WEST, LEWIS G

ART UNIT PAPER NUMBER

2618

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/043,154	Applicant(s) HARANO, NOBUYA	
	Examiner Lewis G. West	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12,14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed April 25, 2006 have been fully considered but they are not persuasive.

Applicant misstates the examiner's rejection. The examiner absolutely never indicated that the antenna in Mizoguchi was not "usable" for transmission; simply that it was not used for that purpose in the reference. Any antenna is capable of transmission, and in this case the antenna has been shown with specific citation to be capable of transmission. "Capable of" is extremely broad claim language and does not limit the claim in the way applicant is arguing. Further Mizoguchi clearly and repeatedly explains that the purpose of his invention is detection of human contact, so applicant's amendment has not overcome the rejection.

Regarding claim 9, In response to applicant's argument that the sensor in Bowen is not combinable, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Further, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant does not properly address the rejection as provided but addresses each reference separately, which is not persuasive.

Art Unit: 2618

New citations have been added to address applicant's amendment of claim 1, thus necessitating a final rejection. Prosecution is closed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5, 7 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi (US 6,678,532) in view of Vannatta et al (5,649,306).

Regarding claim 1, Mizoguchi discloses a portable radio terminal device for radio communication by using an antenna provided in a housing capable of being held by one hand, wherein: a first antenna (11b) capable of transmission disposed in a lower part of the device and a second antenna disposed in an upper part of the device (11a) for radio communication, said first antenna and said second antenna being selectively switched for use (Col. 12 lines 38-47), a sensor (detecting circuit 29) for sensing coverage of a portion of a body of a user (Col. 3, Col. 11 lines 13-34) when the first antenna is covered and outputting a detection signal (Col. 12 lines 17-37); and means for switching between said first antenna and said second antenna for use based on said detection signal. (Col. 12 lines 38-47) Mizoguchi does not expressly disclose that the second antenna is used for transmission. Vannatta discloses a portable radio terminal device comprising: more than one transmission antennas separately provided and switchable located in

Art Unit: 2618

different flaps of a foldable phone. (Col. 4 lines 41-62; Col. 5 lines 34-43) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to switch from a degraded antenna to another antenna in another section inside the housing for transmission, because although Mizoguchi's main embodiment does not describe both antenna being used to transmission, it does state, in col. 12 lines 54-59, that by using the switching circuit optimal positioning is provided resulting in an improvement in **transmission** performance, therefore providing an implicit suggestion that both antennae are capable of transmission. Further Vannatta provides the motivation to separate the antennas into different housing sections as it provides the most efficient use of a small available space to provide the necessary separation for diversity as well as providing distance from interfering electrical components. (See Vanatta col. 3 lines 31-62)

Regarding claim 2, the combination of Mizoguchi and Vannatta discloses the portable radio terminal device according to claim 1, wherein the housing is of a foldable type comprising an upper and a lower housing hinged together by a hinge part, the first and second antennas are disposed in the lower and upper housings, respectively and that both antenna may be internal. (Vannatta, Col. 4 lines 41-62; Col. 5 lines 34-43)

Regarding claim 3, the combination of Mizoguchi and Vannatta discloses the portable radio terminal device according to claim 1, wherein the first or the second antenna is predetermined to be a normally used antenna. (Mizoguchi, Col. 9 line 56-Col 10-line 9, both are "normally" used for different situations)

Regarding claim 5, the combination of Mizoguchi and Vannatta discloses the portable radio terminal device according to claim 4, wherein the sensor is a touch sensor. (Mizoguchi, Col. 6 line 42-67)

Regarding claim 8, the combination of Mizoguchi and Vannatta discloses the portable radio terminal device according to claim 4, wherein the sensor is an impedance change detecting means for detecting a change in the impedance of the antenna. (Mizoguchi, Col. 6 line 42-67)

Claims 9, 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werling (US 6,456,856 B1) in view of Bowen (US 5,224,151).

Regarding claim 9, Werling discloses a portable radio terminal device comprising: a plurality of transmission antennas separately provided; a detector for detecting the deterioration of an antenna characteristic; and a switch for switching, on the basis of the detected result, the operation from the deteriorated transmission antenna to a different transmission antenna. (Col. 3 line 34-col. 4 line 24) but does not expressly disclose an optical sensor. Bowen discloses a mobile radiotelephone wherein a sensor for detecting human proximity, especially the human head (see Figures 2-6) in order to change functional operation of the phone. (Col. 2 lines 10-61) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Werling to use an optical sensor to detect human proximity so that harmful radiation may be directed away from said tissue, and for optimum antenna use to prevent degradation and prevent the unnecessary use of power that can be saved by using a more desirable antenna, and infrared being an inexpensive and widely used type of sensor.

Art Unit: 2618

Regarding claim 11, Werling discloses to claim 9, wherein the detector detects the antenna at least a part of which is covered with a hand or is touched with a head. (Col. 4 lines 4-10)

Regarding claim 12, Werling discloses the portable radio terminal device according to claim 9, wherein the detector is a touch sensor for detecting the touch of hand or head. (Col. 4 liners 4-10)

Regarding claim 15, Werling discloses the portable radio terminal device according to claim 1, wherein a plurality of detectors is provided. (Col. 2 lines 17-24)

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi (US 6,678,532) in view of Vannatta (US 5,649,306) further in view of Bowen (US 5,224,151).

Regarding claim 6, the combination of Mizoguchi and Vannatta discloses a radiotelephone according to claim 1, but does not expressly disclose an optical sensor. Bowen discloses a mobile radiotelephone wherein a sensor for detecting human proximity, especially the human head (see Figures 2-6) in order to change functional operation of the phone. (Col. 2 lines 10-61) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vannatta to use an optical sensor to detect human proximity so that harmful radiation may be directed away from said tissue, and for optimum antenna use to prevent degradation and prevent the unnecessary use of power that can be saved by using a more desirable antenna, and infrared being an inexpensive and widely used type of sensor.

Art Unit: 2618

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi (US 6,678,532) in view of Vannatta (US 5,649,306) further in view of Werling (US 6,456,856 B1).

Regarding claim 7, the combination of Mizoguchi and Vannatta discloses the portable radio terminal device according to claim 4, wherein multiple measurements may be taken to determine antenna coverage (Col. 11 line 47-12 line 7), but does not disclose multiple sensors. Werling discloses the portable radio terminal device wherein a plurality of detectors is provided. (Col. 2 lines 17-24) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a plurality of sensors to provide the user the option of using sensors which are not harmful or “noxious” to human flesh. (See also Col. 2 lines 17-24)

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi - (US 6,456,856 B1) in view of Bowen and further in view of Vannatta (US 5,649,306).

Regarding claim 10, the combination of Werling and Bowen discloses the portable radio terminal device according to claim 9, but does not disclose that the portable radio terminal device is a foldable type including a first housing provided with a first antenna and a second housing provided with a second antenna which are hinged together by a hinge part. Narayanaswamy discloses a portable radio terminal device with switchable antennas wherein the device is a foldable type including a first housing provided with a first antenna and a second housing provided with a second antenna which are hinged together by a hinge part. (Col. 4 lines 41-62; Col. 5 lines 34-43) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have antennae in separate housing sections, to aid in antenna diversity for communication and separation of electrical components. (See Vanatta col. 3 lines 31-62)

Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Werling (US 6,456,856 B1) in view of Bowen and further in view of Mizoguchi (US 6,678,532).

Regarding claim 14, the combination of Werling and Bowen discloses the portable radio terminal device according to claim 9, but does not disclose a detected impedance change of the antenna. Mizoguchi discloses a portable radio terminal device wherein a detector detects an impedance change of the antenna. (Mizoguchi, Col. 6 line 42-67) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use an impedance change to detect the presence of human tissue, so that harmful radiation may be directed away from said tissue, and for optimum antenna use to prevent degradation and prevent the unnecessary use of power that can be saved by using a more desirable antenna.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2618

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis G. West whose telephone number is 571-272-7859. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Lewis West
(571) 272-7859



Matthew D. Anderson
Supervisory Patent Examiner
(571) 272-4177